

WHAT IS CLAIMED IS:

1. An optical printing device for exposing a photosensitive recording medium to form a grayscale image, comprising:

a print head having  $n$  rows of recording elements capable of exposure of different colors and aligned in a direction of advancement of the photosensitive recording medium, where  $n$  is an integer more than 1, the  $n$  rows of recording elements being spaced substantially a multiple of  $L \times (m + k/n)$  apart in the direction of advancement of the photosensitive recording medium, where  $L$  denotes a distance between the centers of recording pixels according to the desired resolution of a recorded image,  $m$  is an integer of 1 or more, and  $k$  is an integer of 1 or more and less than  $n$ ; and

a head driver for driving said print head,

wherein light from said print head is selectively exposed on the photosensitive recording medium to form the grayscale image.

2. An optical printing device according to Claim 1, wherein the recording elements in the  $n$  rows of recording elements capable of exposure of different colors are staggered.

3. An optical printing device for exposing a photosensitive recording medium to form a grayscale image, comprising:

a print head having  $n$  rows of recording elements capable of exposure of different colors and aligned in a direction of advancement of the photosensitive recording medium, where  $n$  is an integer more than 1; and

a head driver for driving said print head to successively perform the exposure of the  $n$  rows of recording elements so as to provide  $n + 1$  colors after the exposure in one line,

wherein light from said print head is selectively exposed on the photosensitive recording medium to form the grayscale image.

4. An optical printing device according to Claim 1, wherein said print head includes at least one driver IC, the driver IC outputting individual electrode and common electrode signals for driving the recording elements in the  $n$  rows of recording elements.

5. An optical printing device according to Claim 1, wherein said print head includes:  
counter means for counting one of a counter clock

signal and a latch signal, the counter clock signal and the latch signal being output from said head driver; and

head data comparator means for comparing the output of said counter means with latched head data.

6. An optical printing device according to Claim 1, wherein said print head further includes a single individual electrode for driving the recording elements in the n rows of recording elements, the individual electrode being shared by a plurality of the recording elements.

7. An optical printing device according to Claim 1, wherein each of different head data signals output from said head driver is supplied to the driver IC on said print head.

8. An optical printing device according to Claim 1, wherein said print head has a positive twisted nematic liquid crystal.

9. An optical printing device according to Claim 1, wherein said print head has an electroluminescent exposing unit.